

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

U.S. Patent Application No. 10/801,425	Confirmation No. 2057
Filed: March 16, 2004	Art Unit: 3714
Inventors: Jeremy G. DUNNE & David Williams	
Customer No. 25235	
Examiner: Mark Alan SAGER	
For: RANGEFINDING INSTRUMENT AND METHOD FOR AUTOMATICALLY DETERMINING AND PROVIDING USER SPECIFIC SUGGESTIONS FOR GOLFING APPLICATIONS	

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Commissioner for Patents
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REPLY BRIEF UNDER 37 CFR § 41.41

In response to the Examiner's Answer dated June 29, 2009, please consider the following:

A summary status of the pending claims begins on page 2 hereof.

Grounds of rejection are described on page 3 hereof.

Arguments begin on page 4 hereof.

STATUS OF CLAIMS

Claims 1-12, 23, 24 and 26-31 stand rejected and are presented for appeal. A complete listing of the claims under appeal is provided in an Appendix to the Appeal Brief previously filed.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

- A. Claims 23, 29 and 31 stand rejected under 35 U.S.C. § 103(a) over *Zeiner-Gundersen* (U.S. Patent No. 6,059,672) in view of *Wilens* (U.S. Patent No. 5,779,566) and *Hines* (U.S. Patent No. 5,933,224).
- B. Claim 24 stands rejected under 35 U.S.C. § 103(a) over *Zeiner-Gundersen* in view of *Wilens* and *Hines* as applied to claim 23 above, and further in view of *Mauritz* (U.S. Patent No. 5,283,732).
- C. Claims 1-7, 10, 12, 26, and 30 stand rejected under 35 U.S.C. § 103(a) over *Zeiner-Gundersen* in view of *Mauritz* and *Hines*.
- D. Claims 8-9, and 11 stand rejected under 35 U.S.C. § 103(a) over *Zeiner-Gundersen* in view of *Mauritz* and *Hines* as applied to claim 1 above, and further in view of *Jenkins* (U.S. Patent No. 5,294,110) or *Jones* (U.S. Patent No. 4,136,394) .
- E. Claims 27-28 stand rejected under 35 U.S.C. § 103(a) over *Zeiner-Gundersen* in view of *Mauritz* and *Hines* as applied to claim 26 above, and further in view of *Wilens*.

ARGUMENTS

In response to the Examiner's Answer, this Reply Brief clarifies the following points. The claimed laser rangefinder is distinctly different than either of the two measuring means taught by *Zeiner-Gundersen*. While *Hines* teaches a laser rangefinder, combining *Hines* with *Zeiner-Gundersen* renders *Zeiner-Gundersen* unsatisfactory for its intended purpose. The Examiner's substitution of a mil radian process as equivalent to a laser rangefinder is improper and tantamount to a new grounds of rejection. *Zeiner-Gundersen* teaches away from a combination with *Hines* and the rejection is based on improper hindsight.

1. *Zeiner-Gundersen* Fails to Teach or Suggest the Claimed Laser Rangefinder

Independent apparatus claim 1 recites a rangefinding instrument which includes "a **laser rangefinder** for determining a range to a selected point on a golf course" (emphasis added). Independent method claim 23 recites the step of "determining a range to a selected point on a golf course with said rangefinding instrument **using a laser rangefinder**" (emphasis added). All dependent claims incorporate these features through dependency.

The laser rangefinder of the claimed invention includes a laser rangefinder as discussed in U.S. Patent No. 5,859,693 (the '693 patent). *See*, page 4, lines 21-28 of the present application as filed. This laser rangefinder contains a transmitter for transmitting laser pulses to a target and a receiver for receiving reflected pulses from the target. A processor connected to the transmitter and the receiver is configured to determine a distance in any position on the golf course within a line of sight, but with a high level of precision.

In contrast, *Zeiner-Gundersen* teaches two different measurement means—a retroflective laser which is configured to scan an area between the ball and the cup in order for the microprocessor to determine the curvature of the green and to calculate the ball trajectory for display on the miniature LCD; and a separate distance measuring means for measuring a longer distance to the flag only using a more rudimentary geometry which

involving the known height of the flag. Neither of these techniques involve the claimed laser rangefinder or its associated methodology.

More particularly, *Zeiner-Gundersen* at col. 2, ll. 46-51 discloses a longer distance measuring means as follows:

[t]he device is provided with a fairway distance measurement means with an integrated individual golf club selector for driving with woods and irons.

As discussed in the previously filed Appeal Brief, *Zeiner-Gundersen* teaches this separate distance measuring means for the long game. This means uses an algorithm based on simple geometry in the driving mode of *Zeiner-Gundersen* to determine distance along a fairway taking into account the height of the flag at a hole. The algorithm utilizes the height of the flag combined with fitting the flag into a tangential function curvature as disclosed in col. 5, ll. 18-25. *Zeiner-Gundersen* also teaches that accurate measurement for long drives is usually not critical. *See* col. 6, ll. 12-13. This measuring means is not a laser rangefinder, does not use the methodology of a laser rangefinder, and does not achieve the precision associated with the claimed laser rangefinder.

Zeiner-Gundersen' primary means on which the Examiner relies is a high performance retroflective laser scanner utilized in the short game. *See* Brief at page 6. The retroflective laser scanner is similar to scanners used on automatic bottle return machines to determine the shape of an article. *Id.* The retroflective laser scanner is not a laser rangefinder, but rather is configured to determine the curvature of a green surface. The retroflective laser scanner is used in the short game, *e.g.*, to determine the curvature of the green and calculate the ball trajectory. *See* col. 4, ll. 27-33. *Zeiner-Gundersen*'s teaching that accurate measurement for long drives is usually not critical, and its detailed description of techniques in determining curvature of a putting green underscores *Zeiner-Gundersen*'s focus on the short game. Taken as a whole, *Zeiner-Gundersen* clearly fails to teach or suggest a laser rangefinder as claimed.

The Examiner tries to cure these deficiencies by asserting *Zeiner-Gundersen*'s retroflective laser scanner is an art recognized equivalent to the claimed laser rangefinder

due to a "statement on page 4 of instant application that other possible rangefinding technologies may be employed." (Answer at 20). Appellant respectfully disagrees and submits the laser rangefinder of the claimed invention is not an art recognized equivalent to the retroflective laser of *Zeiner-Gundersen*. Indeed, the Examiner's reliance on Appellant's disclosure as a basis for the asserted equivalency is simply improper. In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on Applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958) (emphasis added); *See also* MPEP 2144.06.

Clearly, the retroflective laser of *Zeiner-Gundersen* is configured to scan an area between the ball and the cup in order for the microprocessor to determine the curvature of the green and to calculate the ball trajectory for display on the miniature LCD. Appellant respectfully submits that the laser rangefinder of the claimed invention is not disclosed, suggested, or an art-recognized equivalent of *Zeiner-Gundersen's* retroflective laser.

2. Combining *Hines* with *Zeiner-Gundersen* Renders *Zeiner-Gundersen* Unsatisfactory for its Intended Purpose

Combining *Hines* with *Zeiner-Gundersen* renders the latter unsatisfactory for its intended purpose for reasons of record. *See e.g.*, Brief at pp. 7-8. In rebutting this position, the Examiner asserts Appellant provides no factual evidence that *Zeiner-Gundersen* is solely or only for the short game. Appellant respectfully disagrees and directs the Examiner to pages 6-7 of the Brief and discussion *supra*. *Zeiner-Gundersen* discloses using the retroflective laser scanner in a short game, e.g., putting mode. *See e.g.*, col. 4, ll. 27-39, and using simple geometry to determine a distance along a fairway. *See e.g.*, col. 5, ll. 18-25.

The Examiner has simply failed to make a requisite finding based on fact that *Zeiner-Gundersen* discloses the claimed laser rangefinder or teaches or suggests the use of a retroflective laser other than for scanning a curvature of a green. Indeed, the Examiner's current position that the retroflective laser scanner of *Zeiner-Gundersen* which is used for

more than to just illustrate curvature of a green, is inconsistent with a previous statement by the Examiner—in the Final Office Action the Examiner stated, “*Zeiner-Gundersen* discloses use of a laser rangefinder for short distances (6:43-44) but does not suggest its use to ascertain distance for longer than a short distance (present invention is not so limiting).” (Final Office Action, Nov. 12, 2008, page 5). For at least these reasons, Appellant respectfully submits that the retroflective laser scanner of *Zeiner-Gundersen* is solely or only for the short game.

Next, the Examiner asserts that the primary purpose of *Zeiner-Gundersen* is a device for improving the performance of a golfer. (Answer at 23). The Examiner also states, “the Office agrees that the reference stresses the short game.” (Answer at 19). Appellants do not disagree with these assertions. That is, both of these assertions are consistent with each other in that the primary purpose of *Zeiner-Gundersen* is on improving a performance of a golfer by assisting a golfer with his short game. In fact, the field of the invention discloses the “invention relates to a device for teaching the short game of golf.” See col. 1, ll. 5-6. For at least these reasons, Appellant respectfully submits that the intended purpose of the primary reference (*Zeiner-Gundersen*) is assisting a golfer with his short game.

Next, the Examiner asserts that reliance on *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984) is improper as the facts of the present case do not coincide with those of *Gordon*. While the Examiner appears to agree with Appellant’s reasoning in the Appeal Brief, that combining the teaching of *Hines* with *Zeiner-Gundersen* would destroy the short game, the Examiner then asserts that *Zeiner-Gundersen*’s device still may be used to suggest an iron in the long game. (Answer at 24). Appellant respectfully disagrees with the Examiner’s characterization, as the holding in *Gordon* is not so limited.

If a proposed modification renders the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *Id.* For reasons herein and of record, *Zeiner-Gundersen* repeatedly discloses the most important aspect of the apparatus is assisting a golfer with his short game, thereby assisting the golfer with golf. Also, the Examiner appears to admit

that substituting the laser rangefinder of *Hines* for the retroflective laser scanner of *Zeiner-Gundersen* would at least make the device inoperable for the short game. More particularly, substituting laser rangefinder of *Hines* which can only display a distance to the nearest yard clearly destroys the teachings of *Zeiner-Gundersen* renders the apparatus inoperable for its intended purpose because the laser rangefinder of *Hines* cannot determine the curvature of the green and thereby calculate the appropriate trajectory for the ball to follow while being putted across the green. See e.g., col. 2, ll. 30-35, *Zeiner-Gundersen*. For at least these reasons Appellant respectfully submits that combination of *Hines* with *Zeiner-Gundersen* renders the latter unsatisfactory for its intended purpose and the rejection is, therefore, improper.

3. In Effect, Examiner has Improperly Applied a New Ground of Rejection in Rebutting Appellant's Arguments

Appellants respectfully submit that the Examiner has, in effect, improperly applied a new ground of rejection in rebutting Appellant's arguments. That is, the Examiner establishes a new ground of rejection by asserting at page 24 of the Answer,

In response to Appellant assertion on page 8 that there is no teaching in *Hines* to determine curvature of the green, the remark is not well taken since *Hines* is not relied upon to perform that function since *Zeiner-Gundersen* includes structure performing that function as admitted by Appellant in their remark on page 6-7 and holding clearly stated substituting laser rangefinder for mil radian process (supra). (emphasis added).

Appellant respectfully traverses the foregoing remarks as an improper new ground of rejection that is not clear from the prosecution as a whole. That is, throughout the prosecution the Examiner has relied upon *Hines* for teaching a laser rangefinder by substituting the laser rangefinder of *Hines* for the retroflective laser scanner of *Zeiner-Gundersen*. In fact, the Examiner has previously stated "*Zeiner-Gundersen* includes use of laser for determining range that further is evidence that the combination would yield predictable results when an artisan considers the combination as a whole at a time prior to

the invention.” (Final Office Action at 14). Moreover, in the Advisory Action of March 24, 2009 the Examiner states, “

Zeiner-Gundersen discloses a golf device for use on a golf course that provides state of golf environment from various sensor inputs that includes a laser [d]istance measuring means (abstract, 2:13-55, 3:6-67, 4:55-57, 5:58-6:4, 6:43-44, f[ig]s 1-5), but lacks laser rangefinder. *Hines* discloses use of a laser rangefinder on the golf course to provide accurate distant measurement for any distance on the course (abstract, 1:44-3:22, 8:18, 10:48) for determining a range to a [selected] point on a golf course. (Advisory Action at 2-3, emphasis added).

Clearly, the foregoing shows that the Examiner is substituting *Hines's* laser rangefinder for the retroflective laser scanner of *Zeiner-Gundersen*.

Appellant also notes that in the Advisory Action the Examiner states “alternative holding is with regards to adding a laser rangefinder as taught by *Hines* to instructional aid of *Zeiner-Gundersen* to improve distance measurements for longer than short distance so as to improve the advice provided therefrom.” (Advisory Action at 3). Appellant respectfully notes that this statement must be construed to mean that the Examiner is now relying on *Hines* to substitute both the retroflective laser scanner and the simple geometry to determine a distance along a fairway of *Zeiner-Gundersen*.

In the Answer, the Examiner now appears to assert another alternative holding allegedly substituting the laser rangefinder of *Hines* for only the simple geometry algorithm of *Zeiner-Gundersen*. Appellant respectfully submits that this is a new ground of rejection. This new ground of rejection is improper as Appellant has not been given a fair opportunity to react to the rejection. *See* MPEP § 1207.03. In addition, Appellant respectfully submits the applied rejections are improper for failure to comply with 35 U.S.C. § 132 due to lack of sufficient detail. Compliance with 35 U.S.C. § 132 requires that the Office provide sufficient detail regarding the alleged correspondence between the claimed invention and the cited reference(s) to enable an applicant to adequately respond to the rejections. *See* 37 CFR § 1.104 (stating the pertinence of each reference, if not

apparent, must be clearly explained and each rejected claim specified.); MPEP § 706.02(j) (stating it is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply.). Appellant submits the Examiner's rejections are unclear at least with respect to exactly what teaching each reference is being relied upon for reasons set forth herein.

Therefore, Appellant respectfully requests withdrawal of the rejection or for the Examiner to provide either a supplemental Examiner's Answer or obtain appropriate approval as set forth in order to establish the new grounds of the rejection. See MPEP § 1207.03.

4. *Zeiner-Gundersen* Teaches Away from a Combination with *Hines*

Zeiner-Gundersen teaches away from a combination with *Hines* for reasons of record, See Appeal Brief at pp. 9-10, which precludes substituting the laser rangefinder of *Hines* for only the simple geometry used to determine a distance along a fairway of *Zeiner-Gundersen*. That is, *Zeiner-Gundersen* expressly teaches away from *Hines*, by disclosing "Accurac[e] measurement for long drives is usually not critical." See col. 6, ll. 12-13 of *Zeiner-Gundersen* (emphasis added). Accordingly, the lack of criticality of long drive measurements clearly teaches away from substituting the simple geometry algorithm of *Zeiner-Gundersen* with a laser rangefinder of *Hines* and therefore teaches away from the combination.

5. The Proposed Combination of *Hines* with *Zeiner-Gundersen* is Based on Improper Hindsight Reasoning

The Office Action states the rationale for the combination is "improvement for use of laser rangefinder over mil-radian process is implicit in the accuracy of the technology, i.e., improved accuracy of distance to target reading for improved club selection." (Final Office Action, Nov. 11, 2008 at 14). This articulated rationale is unsupported in *Hines* and Appellant respectfully submits it is a conclusion founded on improper hindsight reasoning based on teachings from the instant application. Moreover, *Zeiner-Gundersen* expressly rebuts this rationale by teaching that "Accurac[e] measurement for long drives is usually

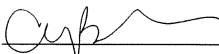
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not critical." See col. 6, ll. 12-13 of *Zeiner-Gundersen* (emphasis added).

In view of all of the above, claims 1-12, 23, 24 and 26-31 are believed to be allowable and the case in condition for allowance. Appellant respectfully requests that the Examiner's rejections be reversed for the pending claims.

Respectfully submitted,

Date: August 31, 2009

A handwritten signature in black ink, appearing to read 'C. Burton', is written over a horizontal line.

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